

इंटरनेट

मानक



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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

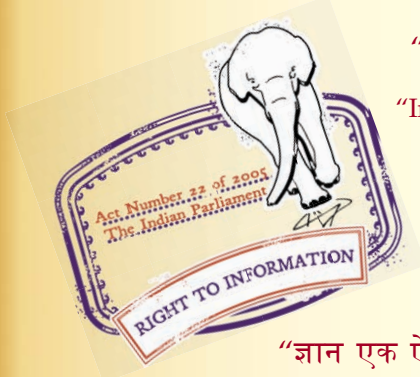
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 12296 (1988): Test Chart for Thread Rolling Machines  
With Cylindrical Dies [PGD 3: Machine Tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”





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*Indian Standard***TEST CHART FOR  
THREAD ROLLING MACHINES WITH CYLINDRICAL DIES**

**1. Scope** — Describes the geometrical tests for thread rolling machines with cylindrical dies and the corresponding permissible deviations, with reference to IS : 2063-1962 'Code for testing machine tools'.

**1.1** It deals only with the verification of accuracy and applies neither to the testing of the running of the machine ( vibrations, abnormal noises, electrical equipment, etc ) nor the machine characteristics ( capacities, speeds, etc, ) which shall generally be checked before testing the accuracy.

**2. Preliminary Remarks**

**2.1** To apply these tests, reference shall be made, in general, to IS : 2063-1962. Although this code cannot be applied in its entirety to thread rolling machines, definitions and method of measurements for flatness, parallelism, squareness, runout, etc, do apply if suitably adopted.

**2.2** The sequence of tests is related to components of the machine and does not define the practical order of testing. In order to make checking or mounting of instruments easier, tests may be carried out in any convenient sequence.

**2.3** When inspecting a machine, it is necessary to carry out all the tests described in this standard, excepting those tests which may be omitted in mutual agreement between the buyer and the manufacturer.

**2.4** Practical tests shall be made only with finishing cuts and not with the roughing cuts which are liable to generate appreciable cutting forces.

**2.5** When establishing the tolerance for a measuring range different from that indicated in this standard ( see 2.3.1.1 of IS : 2063-1962 ), it shall be taken into consideration that minimum tolerance is 0.001 mm. For any proportional value, the calculated value shall be rounded off to 0.001 mm. However, the least count of all measuring instruments need not be finer than 0.001 mm.

**2.6** Whenever alternate methods of testing are suggested, the choice of actual method of testing is left to the manufacturer.

**2.7** For the purpose of this standard, various methods of expressing permissible deviation are employed, each having a particular type of application. The methods employed are as follows:

000/000 for deviations of perpendicularity which are ratios.

000 for any length of 000 for deviations of straightness and parallelism; this expression is used, in fact, for local permissible deviations, the measuring length being obligatory.

000 for 000 for deviations of straightness and parallelism; this expression is used to recommend a measuring length, but in this case the proportionality rule comes into operation if the measuring length differs from those indicated.

**3. Measuring Instruments** — The measuring instruments shall be of the approved type and shall be calibrated at a recognized temperature conforming to the relevant Indian Standards.

**4. Accuracy Requirements** — The test to be carried out, the instruments required, the maximum permissible deviations and the manner of carrying out the test shall be detailed in the test chart.

Adopted 11 March 1988

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BUREAU OF INDIAN STANDARDS  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

**TEST CHART FOR THREAD ROLLING MACHINES WITH CYLINDRICAL DIES**

TYPE.....

ORDER NO.....

CUSTOMER.....

MACHINE NO.....

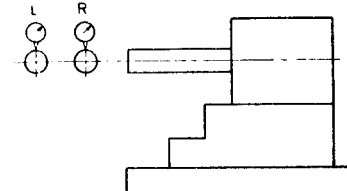
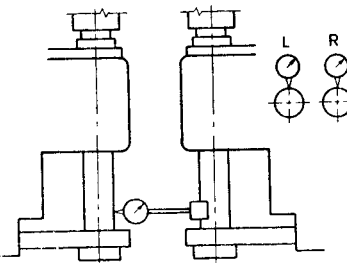
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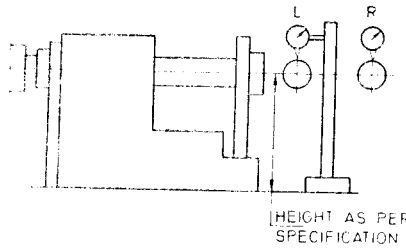
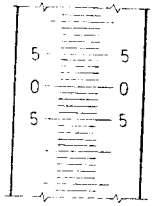
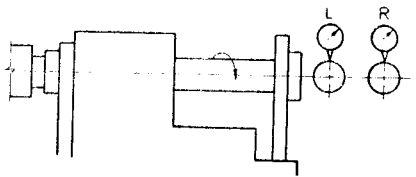
INSPECTOR.....

IS : 12296 - 1988

**I GEOMETRICAL TESTS**

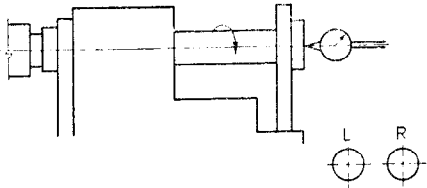
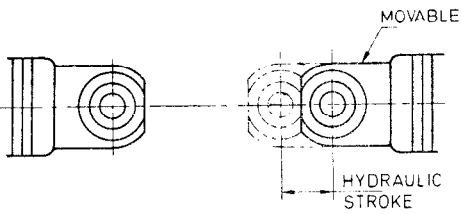
All dimensions in millimetres.

SI No.	Figure	Object	Measuring Instruments	Reference to IS : 2063-1962 and/or Instructions for Testing	Permissible Deviation	Actual Error
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.		<p>Checking of difference of height of roll spindle axes from bed top surface</p>	<p>Dial gauge and magnetic stand</p>	<p>5.3.3.2, 5.3.3.3 Plunger of dial gauge mounted on stand is brought into contact with the top generatrix of the mandrels; readings shall be noted at 3 positions along the spindles (both for L. H. and R. H. units)</p>	<p>0.02 (R. H. spindle higher than L. H. spindle)</p>	
2.		<p>Checking of parallelism of spindle axes to each other with support bracket assembly clamping it firmly with locking pin ( length 100 mm )</p> <p>(a) In horizontal plane</p> <p>(b) In vertical plane</p>	<p>Dial gauge and V-base magnetic stand</p>	<p>5.3.1.2(c)</p>	<p>a) 0.01</p> <p>b) 0.01</p>	

3.		<p>Checking of deviation of spindle axis height from bed surface</p> <p>a) L. H. unit b) R. H. unit</p>	<p>Micrometer, gauge blocks, dial gauge and magnetic stand</p>	<p><b>5.3.3.2, 5.3.3.3</b> Gauge blocks of specified height shall be used to set the dial gauge mounted on vertical dial stand and the procedure as stated for Test No. 1 shall be followed</p>	<p>a) 0.05 b) 0.05</p>	
4.		<p>Checking of swivel scale accuracy when roll spindles are fixed in horizontal '0' position</p> <p>a) L. H. unit b) R. H. unit</p>	<p>Scale, dial gauge and magnetic stand or sine bar and gauge blocks</p>		<p>a) 0°—0'—30" b) 0°—0'—30"</p>	
5.		<p>Checking of runout of roll spindle(s)</p> <p>a) L. H. unit b) R. H. unit</p>	<p>Dial gauge and magnetic stand</p>	<p><b>5.5.1.2(a)</b></p>	<p>a) 0.01 b) 0.01</p>	

(Continued)

TEST CHART FOR THREAD ROLLING MACHINES WITH CYLINDRICAL DIES — Contd

I GEOMETRICAL TESTS						
SI No.	Figure	Object	Measuring Instruments	Reference to IS : 2063-1962 and/or Instructions for Testing	Permissible Deviation	Actual Error
(1)	(2)	(3)	(4)	(5)	(6)	(7)
6.		Checking of periodic axial slip of roll spindle axes a) L. H. unit b) R. H. unit	Dial gauge and magnetic stand	<b>5.5.2.2</b>  <b>Note</b> — The force, 'F' specified by the manufacturer, shall be applied in the direction of the normal working conditions of head.	a) 0.005 b) 0.005	
7.		Checking of accuracy of hydraulic stroke repetition (repeatability of set position)	Dial gauge and magnetic stand	Ten consecutive tests to be carried out for the movable unit.	0.025	

**TEST CHART FOR THREAD ROLLING MACHINES WITH CYLINDRICAL DIES**

NAME .....

ORDER NO. ....

CUSTOMER.....

MACHINE NO. ....

MACHINE.....

DATE.....

INSPECTOR.....

**II PRACTICAL TEST**

All dimensions in millimetres.

Nature of Test	Measuring Instruments	Reference to IS : 2063-1962 and/or Instructions for Testing	Permissible Deviations	Actual Error
(1)	(2)	(3)	(4)	(5)
Accuracy of rolled threads: a) Taper on effective diameter b) Roundness of effective diameter c) Scattering of outside diameter	Measuring cylinder and micrometer	The details of test, test pieces and cutting conditions shall be specified by the manufacturer	a) $\leq 0.02$ b) $\leq 0.01$ c) $\leq 0.05$	

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**IS : 12296 - 1988**

**EXPLANATORY NOTE**

While preparing this standard, considerable assistance has been derived from the data supplied by the leading manufacturers of the product.